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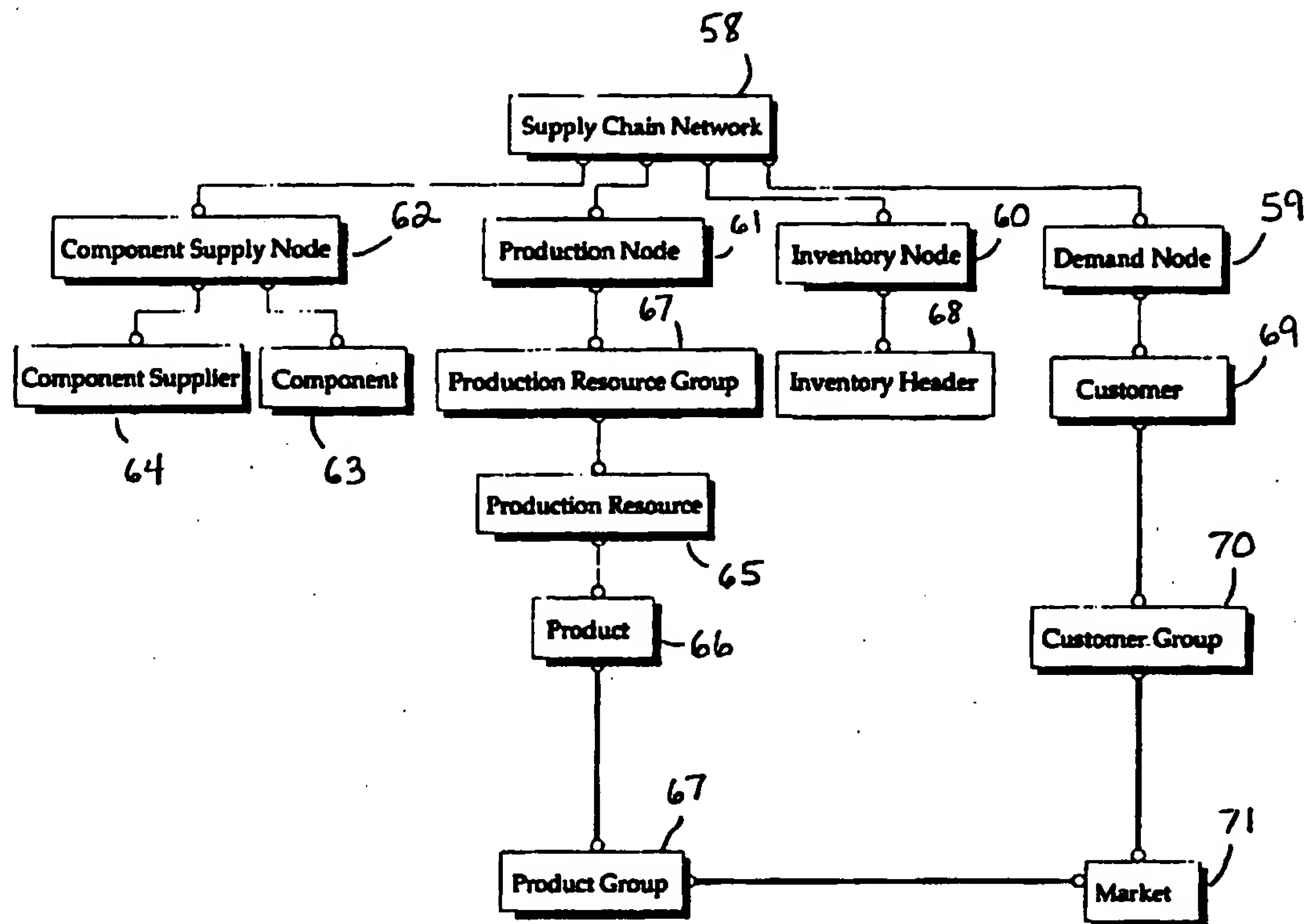
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(54) **Decision support system for the management of an agile supply chain**

(57) A decision support system for the management of an agile supply chain that provides an architecture including a server side and a client side. The server side includes a decision support system database that interfaces with model engine that performs analysis of the data to support planning decisions. The server side includes a server manager that coordinates requests for service and information. The client side includes decision frames that present the various view points available in the system to the users. A frame manager coordinates the requests from decision support frames to access the needed data and models. The decision support frames provide a view into supply chain and integrate analytical models responsive to the view point of a business process such as demand management. The frames include a supply management frame, a demand management frame, a vendor managed replenishment frame, a Planning, Sales and Inventory planning frame and a distribution network design frame. The model engine includes a component procurement policy development module, a finished goods distribution network design module, an aggregate production

planning module, a finished goods inventory management module, a sales forecasting and planning module, a market data analysis module, a vendor managed replenishment module and various utilities such as generic linear programming solvers and statistical analysis routines. The system also includes a demand and supply reconciliation process reconciling production, sales and inventory and reconciling a top-down forecast with a bottom-up forecast where an expert based model is used for the bottom-up forecast. A capacity planning process determines the feasibility of a capacity plan responsive to supply constraints. A vendor managed replenishment process plans inventory replenishment analysis and periods responsive to predicted sales and supply constraints. A scenario management process associated with all frames enables the user to analyze different hypothetical scenarios for comparison of business plans. The frame manager includes a system integrator and a functional integrator. A database management system manages the supply and maintenance of information needed by the modeling processes through the frame manager. A domain

management process limits data available to said frames responsive to a user selection.



Structural Elements in the DSS Database for the Manufacturing Supply Chain

FIG. 5



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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
P, X	GB 2 293 902 A (I2 TECHNOLOGIES INC) 10 April 1996 * page 2, paragraph 2 - page 4, paragraph 2 * * page 6, paragraph 1 * * page 8, paragraph 2 * * page 14, paragraph 2 - page 14, paragraph 3 * * page 18, paragraph 1 - page 21, paragraph 2 *	1-18,20	G06F17/60
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Y		3,6,15-19,21	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G06F
Y	LACAZE ET AL: "C2H2F2: CASE COMPREHENSIVE HYBRID-HYBRID FORECASTING FRAMEWORK" PROCEEDINGS INRIA/IEEE SYMPOSIUM ON EMERGING TECHNOLOGIES AND FACTORY AUTOMATION, vol. 1, 10 - 13 October 1995, pages 701-701-708, XP002082141 * page 1, paragraph 1 - paragraph 4 * * page 708, paragraph 3 *	3,6,15-19,21	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28 October 1998	Examiner Skulikaris, I
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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X	<p>RANDHAWA ET AL: "A decision aid for coordinating fishing and fish processing" EUROPEAN JOURNAL OF OPERATIONAL RESEARCH, vol. 81, no. 1, 16 February 1995, pages 62-75, XP002082142</p> <p>* abstract *</p> <p>* page 62, right-hand column, last paragraph - page 63, left-hand column, paragraph 1 *</p> <p>* page 67, right-hand column, paragraph 2 - page 68, left-hand column, paragraph 1 *</p>	1,9,13, 20	
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